



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/050,834

01/15/2002

Kelly Molenaar

MSH-203RCE

1333

8131 7590 07/14/2009
MCKELLAR IP LAW, PLLC
784 SOUTH POSEYVILLE ROAD
MIDLAND, MI 48640

EXAMINER

GARCIA, ERNESTO

ART UNIT

PAPER NUMBER

3679

MAIL DATE

DELIVERY MODE

07/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/050,834	Applicant(s) MOLENAAR, KELLY	
	Examiner ERNESTO GARCIA	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2008 and 27 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-10 is/are pending in the application.
- 4a) Of the above claim(s) 3,5-7 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

Claims 3, 5-7, and 10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 12, 2003.

Drawings

The drawings were received on December 11, 2008. These drawings are accepted. However, the legend "Figure 9" should be associated with the bracket added.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the lubricant exerting pressure against the retaining member (claim 9, lines 18-19) must be shown or the feature canceled from the claim. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 9 is objected to because of the following informalities:

regarding claim 9, the first occurrence of "retaining member" in line 22 should be --housing-- as the threaded opening is in the flange of the housing, --the-- should be inserted before "pressure" in line 24 as the pressure is the same one recited in line 19, and --threaded-- should be inserted before "into" in line 21. Appropriate correction is

required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

Claim Rejections - 35 USC § 112

Claims 4, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, the metes and bounds of the claim is unclear. In particular, it is still unclear whether the retaining member is part of the metal ball joint since line 11 inferentially recites that the housing is “internally threaded to receive a retaining member” while lines 13-21 further limit the same retaining member as being part of the joint. For purposes of this Office action, the examiner has considered the retaining member as being part of the ball joint as a combination. It is also unclear whether the lubricant is claimed as well since such has been set forth only as intended use at lines 16 yet lines 18-19 indicates that the lubricant exerts pressure against the retaining member. Accordingly, the lubricant and the retaining member should be listed as components of the ball joint similarly done for the components listed in items (i)-(iii). Assuming, arguendo, that the lubricant is now part of the ball-joint and the lubricant exerts pressure against the retaining member as required in lines 18-19, how is the

pressure maintained especially when the lubricant can escape through the channels 26 shown in Figure 6.

Regarding claims 4 and 8, the claims depend from claim 9 and therefore are indefinite.

Claim Rejections - 35 USC § 103

Claims 4, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nienke, 2,900,196, in view of Scheublein Jr. et al., 3,103,377, in view of Maughan, 5,564,853, and further in view of Howard, 5,816,731.

Regarding claim 9, Nienke discloses, in Figure 2, a metal ball joint comprising an elongated shaft **18**, a ball **18d**, a retaining member **24**, a housing **23**, and lubricant. The shaft **18** has an upper end (bottom is up), a lower end (down is up), and a longitudinal axis **a** running through the upper end and the lower end. The shaft **18** is threaded on the lower end. The ball **18d** is rigidly fixed and surmounted on the upper end of the shaft **18**. The ball **18d** has a truncated flat face **18e** at the highest point opposite the upper end of the shaft **18**. The housing **23** has an outside surface, a middle portion, and a lower end. The housing **23** is internally conformed at the lower end of the housing **23**. A portion of the housing **23** is internally threaded **23c**. The middle portion has a means **10a** for attaching the housing **23** to a socket. The retaining member **24**

has an upper surface and a lower end. The retaining member **24** has a lubricating port (unreferenced; see Figure 3) located in the upper surface thereof. The port is openly connected to a duct **22c**. The duct **22c** provides a passageway **26**. The retaining member **24** is fastened in the housing **23**. The retaining member **24** is externally threaded **24a** on the lower end of the member **24**.

However, Nienke fails to disclose the portion of the housing, being internally threaded, being the middle portion, and a set screw threaded into a threaded opening in an upper flange of the housing such that the retaining member can be removed from the housing by removal of the set screw. Further, Nienke fails to disclose the lubricant exerting pressure against the retaining member and the retaining member maintaining a seal between the ball and the housing via the pressure of the lubricant on the truncated flat face **18e** of the ball **18d**.

Scheublein, Jr. et al. teach, in Figures 1 and 5, different sized housings where the middle portion of the housing has been internally threaded to encapsulate a ball in a housing as compared to that shown in Figure 3. Therefore, as taught by Scheublein, Jr. et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the housing of Nienke to be longer or simply replace the retaining member with that of Scheublein Jr. et al. so that the middle portion of the housing is internally threaded in order to encapsulate the ball in the housing.

Maughan teaches, in Figure 8, a set screw **262** threaded into a threaded opening in an upper flange of a housing **208** to retaining member **244** in a housing **208** thus staking the retaining member **244** in place (col. 7, lines 61-62). Therefore, as taught by Maughan, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a set screw threaded into a threaded opening in an upper flange of a housing to stake the retaining member in place.

Howard suggests that a lubricant exerts pressure against a retaining member and the retaining member maintains a seal between the ball and the housing via the pressure of the lubricant on the truncated flat face **18e** of the ball **18d** as part of a high pressure lubricant to maintain the ball lubricated. Therefore, as taught by Howard, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pressurize the lubricant in Nienke to lubricate the ball joint using high pressure lubricant.

Regarding claim 4, given the modification, the means for attaching the housing **23** to the socket would have been an external thread **23d** on the external surface of the middle portion of the housing **23**.

Regarding claim 8, given the modification, the internally conformed lower end of the housing **23** would have comprised shallow channels **31**, **34**.

Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheublein, Jr. et al., 2,954,993, in view of Maughan, 5,564,853, and further in view of Howard, 5,816,731.

Regarding claim 9, Scheublein, Jr. et al., '933 disclose in Figure 9 a metal ball joint comprising an elongated shaft **94**, a ball **100**, a retaining member **104**, a housing **91**, and lubricant. The shaft **94** has an upper end **A2** (see marked-up attachment provided in the last Office action), a lower end **A3**, and a longitudinal axis **x** running through the upper end **A2** and the lower end **A3**. The shaft **94** is threaded on the lower end **A3**. The ball **100** is rigidly fixed and surmounted on the upper end **A2** of the shaft **94**. The member **104** is externally threaded (col. 5, lines 59-61) on the lower end **A9** of the member **104**. The housing **91** has an outside surface **A13**, a middle portion **A14**, and a lower end **92**. The housing **91** is internally conformed at the lower end **92** of the housing **91**. A middle portion of the housing **91** is internally threaded (col. 5, lines 59-61). The middle portion **A14** has a means **95** for attaching the housing **91** to a socket. The retaining member **104** has an upper surface **A8** and a lower end. The retaining member **104** is fastened in the housing **91**. The retaining member **104** has a lubricating port **106** located in the upper surface **A8** thereof. The lubricating port is openly connected to a duct **107** providing a passageway. Appellant is reminded that the lower end **92** of the housing **91**, being internally conformed, is for seating the ball **100**. The retaining member **104** is externally threaded on the lower end of the retaining member **104**.

However, Scheublein Jr. et al. fail to disclose a set screw threaded into a threaded opening in an upper flange of the housing such that the retaining member can be removed from the housing by removal of the set screw, and the ball **100**, at a highest point opposite the upper end **A2** of the shaft **94**, having a truncated flat face. Further, Scheublein Jr. et al. fail to disclose the lubricant exerting pressure against the retaining member and the retaining member maintaining a seal between the ball and the housing via the pressure of the lubricant on the truncated flat face **18e** of the ball **18d**.

Scheublein, Jr. et al. themselves teach, in Figure 4, a ball **59**, at a highest point opposite an upper end of a shaft **52**, having a truncated flat face (unreferenced above **59**). Scheublein, Jr. et al. '933 do not discuss the reason for truncating the ball to have a truncated flat face. It appears that a truncated flat face provides a gap for storing more lubricant than a ball without a truncated flat face. Therefore, as taught by Scheublein et al. '933, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the truncated flat face on the ball, at the highest point opposite an attachment of the shaft to provide a gap for storing more lubricant than a ball without a truncated flat face. Given the modification, the retaining member would have maintained a seal between the ball and the housing via the pressure of the lubricant on the truncated flat face of the ball.

Maughan teaches, in Figure 8, a set screw **262** threaded into a threaded opening in an upper flange of a housing **208** to retaining member **244** in a housing **208** thus staking the retaining member **244** in place (col. 7, lines 61-62). Therefore, as taught by Maughan, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a set screw threaded into a threaded opening in an upper flange of a housing to stake the retaining member in place.

Howard suggests that a lubricant exerts pressure against a retaining member and the retaining member maintains a seal between the ball and the housing via the pressure of the lubricant on the truncated flat face **18e** of the ball **18d** as part of a high pressure lubricant to maintain the ball lubricated. Therefore, as taught by Howard, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pressurize the lubricant in Scheublein Jr. to lubricate the ball joint using high pressure lubricant.

Regarding claim 4, given the modification, the attaching means **95** would have been an external thread on an external surface of the middle portion **A14** of the housing **91** (col. 5, lines 53-55).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scheublein, Jr. et al., 2,954,993, in view of Maughan, 5,564,853, and further in view of

Howard, 5,816,731, as applied to claims 4 and 9, and further in view of Maughan et al., 5,885,022.

Regarding claim 8, Scheublein, Jr. et al., as modified, fail to disclose the internally conformed lower end of the housing comprising shallow channels. Maughan et al. teach, in Figure 1, an internally conformed lower end **36** comprising shallow channels **38** to improve joint lubrication (col. 2, lines 63-65). Therefore, as taught by Maughan et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the internally conformed lower end of Scheublein, Jr. et al. with shallow channels to improve joint lubrication.

Response to Arguments

Applicant's arguments do not comply with 37 CFR 1.111 because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited. Further, they do not show how the amendments avoid such references.

With respect to Nienke in view of Scheublein Jr. et al., applicant argues that Ninke and Scheublein were never meant to take the high lateral loads found in racing. In response, applicant is reminded that the rejected claims do not mention anything about lateral loads in racing and therefore this argument is not commensurate with the

scope of the claims. Assuming that such language is present, it should be noted that it is a part of the expected level of skill of one of ordinary skill in the art to simply choose materials that can take up loads found in rockets, which will be greater than those found in racing.

Applicant further argues that the references are fifty years old and thus they are old technology. In response, it should be noted that age of a reference has little bearing on the propriety of a rejection and any contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

With respect to the enclosed pages from the automotive magazine Dick Berggren's Speedway, the illustration therein is nothing like those found in the references and no nexus to the instantly claimed invention and/or the applied rejections is found. In particular, note that the illustration lacks the ball being truncated as found in Nienke and Nienke does not teach springs such as those discussed by Chas Howe in the illustration. Further, there's nothing in the applicant's remarks that specifically points out what is the contribution to the art. The article merely sets forth some opinion and is subject to scrutiny among other ball joints. Even the article mentions that "other suspension component manufacturers offer low friction ball joints". It is presumed that they are the same as those made by Howe Racing Products. Further, if the competing Federal Mogul contributed to the low friction ball joint, why is there one inventor in this instant application?

Applicant further argues that Nienke teaches only one length of ball while the instant invention provides different lengths. In response, there's nothing in the claims that mentions anything about providing different lengths and thus the argument is not commensurate with the scope of the claimed invention. Applicant further argues that there is no provision in Nienke for replacing parts. In response, it is pointed out that neither do applicant's claims set forth anything about "replacing parts". Applicant further argues that grease found in Scheublein's device only lubricates. In response, note the 35 USC 112, 2nd paragraph, rejection. Further, as much as the same recited structure is found in Nienke, inherently there is similar pressure build up.

With respect to Scheublein, Jr. et al., in view of Maughan, applicant argues that Maughan uses compressed surfaces to hole the ball stud and the ball stud is crimped into place. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Further, it should be noted that the examiner is not relying on the crimping to make the rejection. The examiner is merely using Maughan to teach the lubricating channels.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Howard, 5,435,652, teaches pressurizing lubricant.

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. In particular, the new recitations "the lubricant exerting pressure against the retaining member to maintain pressure on the ball" recited in claim 9, lines 18-19, and "the retaining member maintaining a seal between the ball and the housing via pressure of the lubricant on the truncated flat face of the ball" recited in claim 9, lines 23-25, necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30AM-6:00PM. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/E. G./

Examiner, Art Unit 3679

July 14, 2009

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679